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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,840

12/22/2003

Paul Murphy

200917

9077

7590

07/31/2006

Neal L Slifkin
99 Garnsey Road
Pittsford, NY 14534

EXAMINER

STAFIRA, MICHAEL PATRICK

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/743,840		MURPHY ET AL.	
	Examiner		Art Unit	
	Michael P. Stafira		2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 5/2/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 23-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-19 and 32-36 is/are allowed.
- 6) ☒ Claim(s) 1-10, 20 and 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Examiner's Amendment</u> . |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- a. In claim 28, change the claim dependency from "claim 21" to --claim 23--.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In independent claims 1, 9-10, 20, 23 merely determining; selecting; calculating; evaluating would not appear to be sufficient to constitute a tangible result, since the outcome of the determining, selecting, calculating, and evaluating step has not been used in a disclosed practical application nor made available in such a manner that's its usefulness in a disclosed practical application can be realized. See OG Notices: 22 November 2005, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility". Dependent claims 2-8, 23-31 hold the same deficiencies as to the corresponding depended claims listed above. Claims above would be allowable once the 101 problems are corrected.

Allowable Subject Matter

1. Claims 11-19, 32-36 are allowed over the prior art of record.

Regarding claim 11, the prior art fails to disclose or make obvious a method for aligning a wavefront-measuring gauge to a mechanical positioning system having a spindle axis having the steps of using said gauge to measure angular misalignment between said spindle (A) axis and said gauge; and e) re-orienting said gauge mainframe with respect to said mechanical positioning system, based on said angular misalignment measurement, to align said mainframe with said spindle axis, and in combination with the other recited limitations of claim 11. Claim 12 is allowed by the virtue of dependency on the allowed claim 11.

Regarding claim 13, the prior art fails to disclose or make obvious a method for calibrating and aligning a metrology system including a multi-axis mechanical positioning system and an embedded wavefront-measuring gauge to determine accurately the spatial relationships among the translational and rotational axes of the system having the steps of aligning said embedded gauge onto said A rotational axis; determining spatial offsets between said rotational axes when so aligned; and precisely aligning said machine rotational axes with said respective translational axes to set precise zero points for said rotational axes, and in combination with the other recited limitations of claim 13. Claims 14-19 are allowed by the virtue of dependency on the allowed claim 13.

Regarding claim 32, the prior art fails to disclose or make obvious a method for aligning an interferometer aperture converter to a mechanical positioning system having a spindle axis having the steps of placing a corner cube having a measurable front surface on the spindle; using

the interferometer to measure angular misalignment between the spindle axis and the interferometer with aperture converter attached; and re-orienting the aperture converter with respect to the interferometer mainframe, based on the angular misalignment measurement, to align the aperture converter on the interferometer mainframe with the spindle axis, and in combination with the other recited limitations of claim 32. Claim 33 is allowed by the virtue of dependency on the allowed claim 32.

Regarding claim 34, the prior art fails to disclose or make obvious a method for aligning an interferometer aperture converter to a mechanical positioning system having a spindle axis having the steps of placing a corner cube having a measurable front surface on the spindle; using the interferometer to measure angular misalignment between the spindle axis and interferometer with aperture converter attached; and re-orienting the aperture converter with respect to the interferometer mainframe, based on the angular misalignment measurement, to align the aperture converter on the interferometer mainframe with the spindle axis, and in combination with the other recited limitations of claim 34. Claim 35 is allowed by the virtue of dependency on the allowed claim 34.


Regarding claim 36, the prior art fails to disclose or make obvious a method for aligning a transmission sphere to an interferometer with partial coherence having the steps of introducing misalignment interference fringes with a distinct center, such as would be observed by moving the test part along the axis of the interferometer; changing the focus position of the interferometer as necessary to observe a modulation envelope over the interference fringes; and adjusting the tip/tilt of the transmission sphere to make the modulation envelope pattern and the fringe pattern concentric, and in combination with the other recited limitations of claim 36.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Michael P. Stafira
Primary Examiner
Art Unit 2877

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